

IN THE CLAIMS

1. (Currently Amended) A medium access control identification code (MAC_ID) embodied in a network device and assigned by a base station from a MAC_ID space to each one of a plurality of mobile stations; wherein the MAC_ID is assigned to each of a first group of the plurality of mobile stations in an ascending order from the MAC_ID space for a first group of mobile stations, and wherein the MAC_ID is assigned to each of a second group of the plurality of mobile stations in a descending order from the MAC_ID space for a second group of mobile stations.

2. (Original) A medium access control identification code as in claim 1, wherein the first group of mobile stations use a forward link channel.

3. (Original) A medium access control identification code as in claim 1, wherein the second group of mobile stations use a reverse link channel.

4. (Original) A medium access control identification code as in claim 1, wherein the MAC_ID is assigned in at least one of a forward link allocation channel and a reverse link allocation channel for user traffic identification.

5. (Currently Amended) A method ~~for transition from a reverse link Control Hold Mode for a cellular communications system comprising a base station in communication with a mobile station, wherein a reverse link data channel is in operation without an assigned Forward Packet Data Channel, the method~~ comprising:

initiating a transition by ~~the~~a mobile station from ~~the~~a Control Hold Mode of a reverse link packet data channel for communication between a base station and the mobile

station to an active state of the reverse link packet data channel, by sending a transition mode request to the base station;

turning on a rate request channel by the mobile station, the mobile station requesting a reverse link transmission;

monitoring a rate grant channel with the mobile station;

acknowledging the reception of the transition mode request by sending an individual grant to the mobile station from ~~the~~ a base station, thereby granting permission to transmit;

transitioning the mobile station to the active state of the reverse link packet data channel upon receipt of the grant, the mobile station starting to transmit on the reverse link packet data channel in autonomous mode; and,

commencing monitoring of a Forward Acknowledgement Channel with the mobile station.

6. (Currently Amended) A method as in claim ~~5~~14, wherein initiating a transition by the mobile station from the active state of the reverse link packet data channel to the Control Hold Mode of the reverse link packet data channel comprises:

gating a reverse pilot and a reverse rate request channel by the mobile station;

detecting by the base station the transition by the mobile station from the active state of the reverse link packet data channel to the Control Hold Mode of the reverse link packet data channel ~~by the base station~~;

stopping transmission on the Forward Acknowledgement Channel by the base station;

stopping monitoring of the reverse link packet data channel by the base station; and

transitioning the mobile station to the Control Hold Mode.

7. (Currently Amended) A method as in claim 6, wherein the base station controls the transition from the active state of the reverse link packet data channel to the Control Hold Mode of the reverse link packet data channel when ~~the~~ a Forward Packet Data Channel is assigned.

8. (Original) A method as in claim 5, wherein a reverse rate request channel is gated at a reduced rate of one half or less.

9. (Currently Amended) A method as in claim 5, wherein the rate of the grant channel is reduced to reduce ~~the~~ mobile station power consumption.

10. (Currently Amended) A method ~~for transition from a reverse link Control Hold Mode for a cellular communications system comprising a base station in communication with a mobile station, wherein a reverse link data channel is in operation without an assigned Forward Packet Data Channel, the method~~ comprising:

initiating a transition by ~~the~~ a base station from ~~the~~ a Control Hold Mode of a reverse link packet data channel for communication between the base station and a mobile station to an active state of the reverse link packet data channel by sending a transition mode request to the mobile station;

sending an individual grant via a forward grant channel to the mobile station to initiate the mode transition; and

transitioning the mobile station to the active state of the reverse link packet data channel, wherein the mobile station transmits on the reverse link packet data channel in the active state.

11. (Currently Amended) A method ~~for transition from a reverse link Control Hold Mode for a cellular communications system comprising a base station in communication with a mobile station, wherein a reverse link data channel is in operation with an assigned Forward Packet Data Channel, the method~~ comprising:

initiating a transition by ~~the~~ a mobile station from the a Control Hold Mode of a reverse link packet data channel for communication between a base station and the mobile station to an active state of the reverse link packet data channel, by sending a transition mode request to the base station;

~~sending an acknowledgement on a reverse acknowledgement channel by the mobile station;~~

turning on a rate request channel by the mobile station, the mobile station requesting a reverse link transmission;

commencing monitoring of a rate grant channel and a Forward Acknowledgement Channel with the mobile station;

acknowledging the reception of the transition mode request by sending an individual grant to the mobile station from the base station, thereby granting permission to transmit;

commencing continuous transmission by the mobile station on a reverse channel quality indication channel;

turning on a reverse acknowledgement channel;

commencing monitoring of a Forward Packet Data Control Channel; and,

transitioning the mobile station to the active state of the reverse link packet data channel upon receipt of a control message with specific message type, the mobile station starting to transmit autonomous rate on the reverse link packet data channel.

12. (Original) A method as in claim 11, wherein the reverse channel quality indication channel is gated at a reduced rate of one half or less.

13. (Currently Amended) A method ~~for transition from a reverse link Control Hold Mode for a cellular communications system comprising a base station in communication with a mobile station, wherein a reverse link data channel is in operation with an assigned Forward Packet Data Channel, the method~~ comprising:

initiating a transition by ~~the a~~ base station from ~~the a~~ Control Hold Mode of a reverse link packet data channel for communication between a base station and the mobile station to an active state of the reverse link packet data channel by sending a transition mode request to the mobile station;

setting an extended message type identifier indicating that the mobile station is to exit the Control Hold Mode;

initiating the mode transition by sending a medium access control identification code by the base station via a Forward Packet Data Control Channel to the mobile station;

turning on a Reverse Channel Quality Indication Channel and a Reverse Acknowledgement Channel by the mobile station;

monitoring the Forward Packet Data Control Channel; and

transitioning the mobile station to the active state of the reverse link packet data channel, wherein the mobile station transmits on the reverse link packet data channel in the active state of the reverse link packet data channel.

14. (New) A method as in claim 5, further comprising initiating a transition by the mobile station from the active state of the reverse link packet data channel to the Control Hold Mode of the reverse link packet data channel.

15. (New) An apparatus adapted to assign medium access control identification codes (MAC_IDs) MAC_IDs from a MAC_ID space to each of a first group of mobile stations of a plurality of mobile stations in an ascending order from the MAC_ID space, and adapted to assign MAC_IDs to a each of a second group of mobile stations in a descending order from the MAC_ID space.

16. (New) An apparatus as in claim 15, wherein the first group of mobile stations use at least a reverse link channel to communicate with the apparatus and the second group of mobile stations use at least a forward link channel to communicate with the apparatus.

17. (New) An apparatus as in claim 15, wherein the first group of mobile stations use a first carrier, and the second group of mobile stations use a second carrier.

18. (New) An apparatus as in claim 15, wherein the MAC_IDs for the first and second groups of mobile stations are reserved in first and second blocks, respectively, and wherein mobile stations having MAC_IDs in the first block monitor a first bitmap field in a channel from the

apparatus to the plurality of mobile stations and mobile stations having MAC_IDs in the second block monitor a second bitmap filed in the channel.

19. (New) A method comprising:

assigning medium access control identification codes (MAC_IDs) from a MAC_ID space to each of a first group of a plurality of mobile stations in an ascending order from the MAC_ID space, wherein the plurality of mobile stations communicate with an apparatus; and

assigning MAC_IDs to each of a second group of the plurality of mobile stations in a descending order from the MAC_ID space.

20. (New) A method as in claim 19, wherein the first group of mobile stations use at least a reverse link channel to communicate with the apparatus and the second group of mobile stations use at least a forward link channel to communicate with the apparatus.

21. (New) A method as in claim 19, wherein the first group of mobile stations use a first carrier, and the second group of mobile stations use a second carrier.

22. (New) A method as in claim 19, wherein the MAC_IDs for the first and second groups of mobile stations are reserved in first and second blocks, respectively, and wherein mobile stations having MAC_IDs in the first block monitor a first bitmap field in a channel from the apparatus to the plurality of mobile stations and mobile stations having MAC_IDs in the second block monitor a second bitmap filed in the channel.

23. (New) A signal bearing medium tangibly embodying a program of machine-readable instructions executable by a network device to perform operations comprising:

assigning medium access control identification codes (MAC_IDs) from a MAC_ID space to each of a first group of a plurality of mobile stations in an ascending order from the MAC_ID space, wherein the plurality of mobile stations communicate with an apparatus; and

assigning MAC_IDs to each of a second group of the plurality of mobile stations in a descending order from the MAC_ID space.

24. (New) A signal bearing medium as in claim 23, wherein the first group of mobile stations use at least a reverse link channel to communicate with the apparatus and the second group of mobile stations use at least a forward link channel to communicate with the apparatus.

25. (New) A signal bearing medium as in claim 23, wherein the first group of mobile stations use a first carrier, and the second group of mobile stations use a second carrier.

26. (New) A signal bearing medium as in claim 23, wherein the MAC_IDs for the first and second groups of mobile stations are reserved in first and second blocks, respectively, and wherein mobile stations having MAC_IDs in the first block monitor a first bitmap field in a channel from the apparatus to the plurality of mobile stations and mobile stations having MAC_IDs in the second block monitor a second bitmap field in the channel.

27. (New) A mobile station adapted:

to send a transition mode request to a wireless network to initiate a transition by the mobile station from a Control Hold Mode of a reverse link packet data channel to an active state of the reverse link packet data channel ;

to turn on a rate request channel;

to request a reverse link packet data channel transmission;

to monitor a rate grant channel;

in response to a receipt of an individual grant from the wireless network, to transition to the active state of the reverse link packet data channel ;

to initiate transmission on the reverse link packet data channel in autonomous mode; and,

to monitor a Forward Acknowledgement Channel.

28. (New) The mobile station of claim 27, wherein the reverse link packet data channel is in operation without an assigned Forward Packet Data Channel.

29. (New) The mobile station of claim 28, wherein the mobile station is further adapted:

to gate a reverse pilot and a reverse rate request channel;

to stop transmission on the Forward Acknowledgement Channel;

to stop monitoring of the reverse link packet data channel; and

to transition to the Control Hold Mode reverse link packet data channel.

30. (New) The mobile station of claim 27, wherein the reverse link packet data channel is in operation with an assigned Forward Packet Data Channel, and wherein the mobile station is further adapted:

to commence continuous transmission on a reverse channel quality indication channel;

to turn on a reverse acknowledgement channel; and,

to commence monitoring of the assigned Forward Packet Data Control Channel.

31. (New) The mobile station of claim 30, wherein the mobile station is responsive to a signal from the wireless network to control a transition by the mobile station from the active state of the reverse link packet data channel into the Control Hold Mode of the reverse link packet data channel.

32. (New) A signal bearing medium tangibly embodying a program of machine-readable instructions executable by a mobile station to perform operations comprising:

sending a transition mode request to a wireless network to initiate a transition by the mobile station from a Control Hold Mode of a reverse link packet data channel to an active state of the reverse link packet data channel ;

turning on a rate request channel;

requesting a reverse link packet data channel transmission;

monitoring a rate grant channel;

in response to a reception of an individual grant from the wireless network, transitioning to the active state of the reverse link packet data channel in response to receipt of the grant;

initiating transmission on the reverse link packet data channel in autonomous mode; and,

monitoring a Forward Acknowledgement Channel.

33. (New) The signal bearing medium of claim 32, wherein the reverse link packet data channel is in operation without an assigned Forward Packet Data Channel.

34. (New) The signal bearing medium of claim 33, wherein the operations further comprise:
gating a reverse pilot and a reverse rate request channel;
stopping transmission on the Forward Acknowledgement Channel;
stopping monitoring of the reverse link packet data channel; and
transitioning to the Control Hold Mode for the reverse link packet data channel.

35. (New) The signal bearing medium of claim 32, wherein the reverse link packet data channel is in operation with an assigned Forward Packet Data Channel, and wherein the operations further comprise:
commencing continuous transmission on a reverse channel quality indication channel;
turning on a reverse acknowledgement channel; and,

commencing monitoring of the assigned Forward Packet Data Control Channel.

36. (New) The signal bearing medium of claim 35, wherein the mobile station responds to a received signal to control transition by the mobile station from the active state of the reverse link packet data channel into the Control Hold Mode of the reverse link packet data channel.

37. (New) A medium access control identification code as in claim 1, wherein the first group and the second group of mobile stations are associated with two different carriers.

38. (New) An apparatus comprising:

means for assigning medium access control identification codes (MAC_IDs) from a MAC_ID space to each of a first group of a plurality of mobile stations in an ascending order from the MAC_ID space, wherein the plurality of mobile stations communicate with an apparatus; and

means for assigning MAC_IDs to each of a second group of the plurality of mobile stations in a descending order from the MAC_ID space.

39. (New) An apparatus as in claim 38, wherein the first group of mobile stations use at least a reverse link channel to communicate with the apparatus and the second group of mobile stations use at least a forward link channel to communicate with the apparatus.

40. (New) An apparatus as in claim 38, wherein the first group of mobile stations use a first carrier, and the second group of mobile stations use a second carrier.